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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,570	09/27/2006	Koichi Araki	2400.0770000/VLC/L-Z	6589

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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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BALASUBRAMANIAN, VENKATARAMAN

ART UNIT	PAPER NUMBER
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1624

MAIL DATE	DELIVERY MODE
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04/30/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,570	<b>Applicant(s)</b> ARAKI ET AL.	
	<b>Examiner</b> /Venkataraman Balasubramanian/	<b>Art Unit</b> 1624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicants' response, which included amendment to claims 1, 2, 4 and 5, filed on 2/12/2008, is made of record. In view of applicants' response, the 112 second paragraph rejection made in the previous office action has been obviated. However, the following 103 rejection made in the previous office action is maintained.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gates et al., 5,885,935 in view of Yoshimura et al., US 6,458,748.

Gates et al., teaches several heterocyclic sulfonamides useful as herbicides, which include generically instant compounds, process of making, composition and method of use. See column1, formula I. Note with the given definition of A ring, Y, Q, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup>, the compounds taught by Gates et al., include generically instant compounds. See column 1- 6 for details of the invention and the process of making. See column 7 through column 12 for examples A1- A127. Especially see column 12, examples A92 and A95 which differ from instant compound in having CF<sub>3</sub> instead of CHF<sub>2</sub> group required by the instant claims. Also see examples A108 and A109 for positional isomers.

Instant claims differ from Gates et al., in requiring a difluoromethylsulfonamide instead of trifluoromethylsulfonamide.

The secondary reference Yoshimura et al., teaches several difluoromethanesulfonamide and trifluoromethanesulfonamide as herbicides. See entire document. Note equivalency of difluoromethanesulfonamide with trifluoromethane sulfonamide is clearly taught by Yoshimura et al. See examples 1, 2, 3 and 4. Especially note example 4, which has the difluoromethanesulfonamide group.

As noted above, the generic definition of Gates include a methoxymethyl group in the phenyl ring (A ring) and Gates explicitly teaches halogen for the said group.

Thus, it would be obvious to one trained in the art to make both difluoromethanesulfonamide and trifluoromethanesulfonamide as herbicides bearing halogen in the phenyl ring and expect the compounds to have herbicidal activity in view of equivalency teachings outlined above.

Although, specification has unexpected/superior results, the comparison of prior art compound is rather limited and does not include compounds taught in Gates and the secondary reference. Hence, this rejection is deemed as proper.

Note Ex parte Gelles 22 USPQ 2d 1318, especially the following quote: " The evidence relied upon also should be reasonably commensurate in scope with the subject matter claimed and illustrate the claimed subject matter " as a class" relative to prior art subject matter."

Applicants' traversal based on careful analysis of applied both primary and secondary reference was not entirely persuasive.

Applicants have asserted that compounds taught by Gates differ from instant compounds in having at least two variations. This is incorrect. The compound A7 and A9 of Gates differ from instant compound in one variation. That is these compounds have CF<sub>3</sub> group instead of CF<sub>2</sub> group on the sulfonamide. The generic teaching of Gates permits such a group. The secondary reference Yoshimura clearly teaches such difluoromethyl sulfonamide compounds and Q definition of Gates permits CHOH group bearing compounds. Thus there is an equivalency teaching. The gist of the above rejection given only one variation based on compounds A7 and A9, one trained in the

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art would be motivated to make the difluoro analogs of these compounds and expect these compounds to have desired activity.

Applicants have not compared compounds A7 and A9 of Gates to show that instant compounds have unexpected superior activity. Instead, applicants have compared compounds which are not closest prior art compounds and have two variations.

Also see *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007), wherein the court stated that

[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Such is the case with instant claims. Gates teaches generically a finite number of choices for  $R^1$ , and exemplifies number of compounds with  $CF_3$  group on the sulfonamide instead of  $CHF_2$ . Gates compounds pointed out above differ from instant in only such a variation. The secondary clearly teaches analogous compounds bearing sulfonamide with  $CHF_2$  are equally active herbicides. Hence, based on the combined teachings, one trained in the art would be motivated to make compounds wherein the sulfonamide has  $CHF_2$  group. Such compounds are within the skill set of one trained in the art.

Hence, this rejection is proper and is maintained.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624